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Notice of Allowability	Application No.	Applicant(s)	
	10/620,575	YOO ET AL.	
	Examiner	Art Unit	
	Timothy L. Rude	2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to election filed 25 October 2005.
2. ☒ The allowed claim(s) is/are 18 and 33.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☒ Certified copies of the priority documents have been received in Application No. 09/836,352.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

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DETAILED ACTION

Claims

The specification and claims 18-20, 30, 33, and 34 are amended.

Election/Restrictions

Applicant's election without traverse of species H in the reply filed on 25 October 2005 is acknowledged.

Claims 19, 20, 30, and 34 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 25 October 2005.

This application is in condition for allowance except for the presence of claims 19, 20, 30, and 34 drawn to species non-elected without traverse. Accordingly, claims 19, 20, 30, and 34 have been cancelled.

Allowable Subject Matter

Claims 18 and 33 are allowed.

The following is an examiner's statement of reasons for allowance:

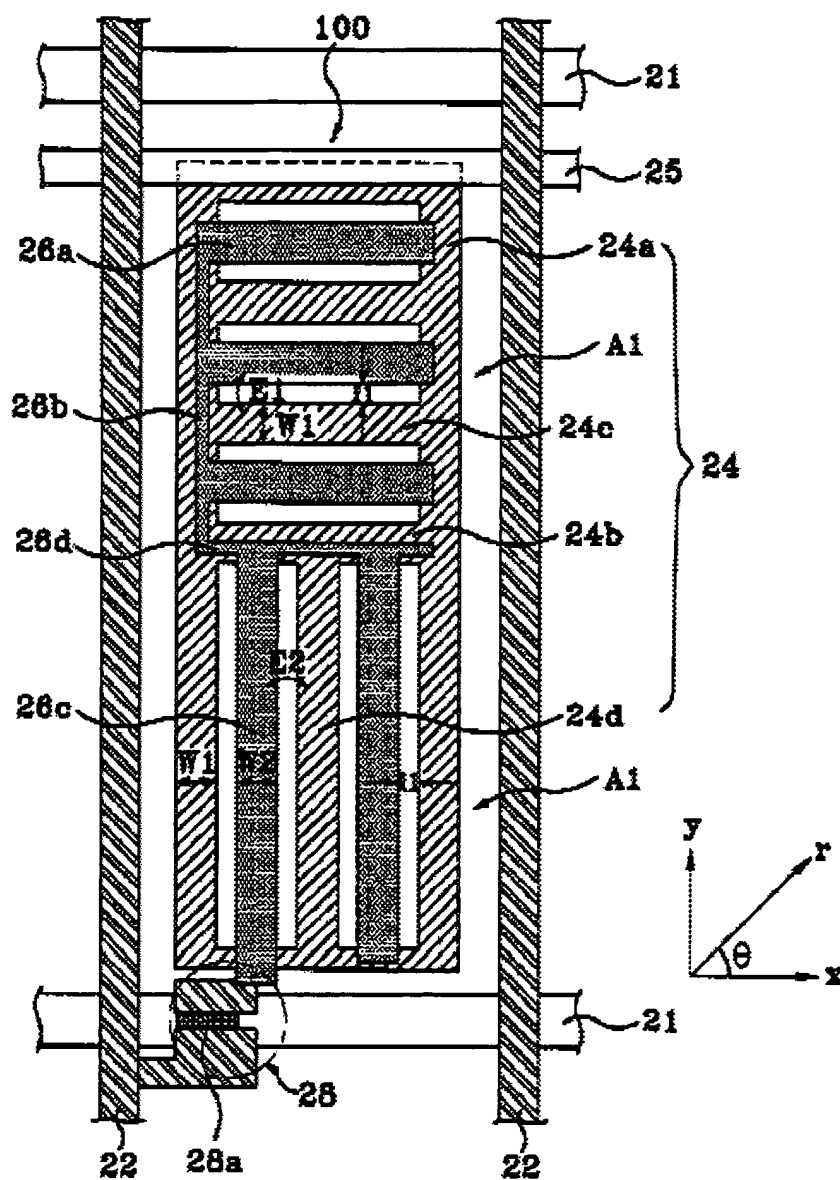
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As to claims 18 and 33, relevant prior art of record did not disclose, alone or in combination, an array substrate for an in-plane switching liquid crystal device (IPS-LCD) as claimed comprising all the structural limitations as to specific line and electrode placements wherein the plurality of common electrodes have portions that do not continue entirely across a pixel region, and wherein the portions of the common electrodes that do not continue entirely across the pixel region and the auxiliary pixel electrode form a virtual line parallel to the gate line.

The closest combination is Lee et al (Lee) USPAT 6,266,118 B1 in view of Hirakata et al (Hirakata) USPAT 5,977,562.

Lee discloses (Abstract, Title, entire patent and first embodiment) an array substrate for an IPS-LCD device (col. 6, line 35 through col. 9, line 54), comprising:

FIG. 3



a substrate; a gate line, 21, on the substrate; a data line, 22, perpendicular to the gate line; a thin film transistor, 28, at a crossing portion between the gate and data lines; a common line, 25, parallel to the gate line; a plurality of common electrodes, 24a, and its

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counterpart on the left, extending perpendicular to the common line, the plurality of common electrodes being divided into first and second portions of respective first and second domains [multiple common electrode portions in upper and lower domains]; a plurality of pixel electrodes, 26c and 26b, arranged alternately with the plurality of common electrodes, the plurality of pixel electrodes being divided into first and second portions of the respective first and second domains [multiple pixel electrode portions in upper and lower domains]; an auxiliary common electrode, 24c, perpendicularly contacting each of the common electrodes; and an auxiliary pixel electrode, 26d, perpendicularly contacting each of the pixel electrodes; wherein the auxiliary pixel electrode is spaced apart from the auxiliary common electrode; and the pixel electrodes are on a same layer as said auxiliary pixel electrode, and wherein the plurality of common electrodes have a portion, 24d, that does not continue all the way across the pixel region.

Hirakata teaches in the fourth embodiment (col. 8, line 56 through col. 9, line 34) a dielectric film, 205 (Applicant's first passivation layer), over the gate insulating layer, the data line and thin film transistor; a plurality of pixel electrodes, 321, on the first passivation layer; a second dielectric film, 206 (Applicant's second passivation layer), over the pixel electrodes; a common line, 322, on the second passivation layer to comprise a structure with increased aperture ratio (col. 8, lines 57-59).

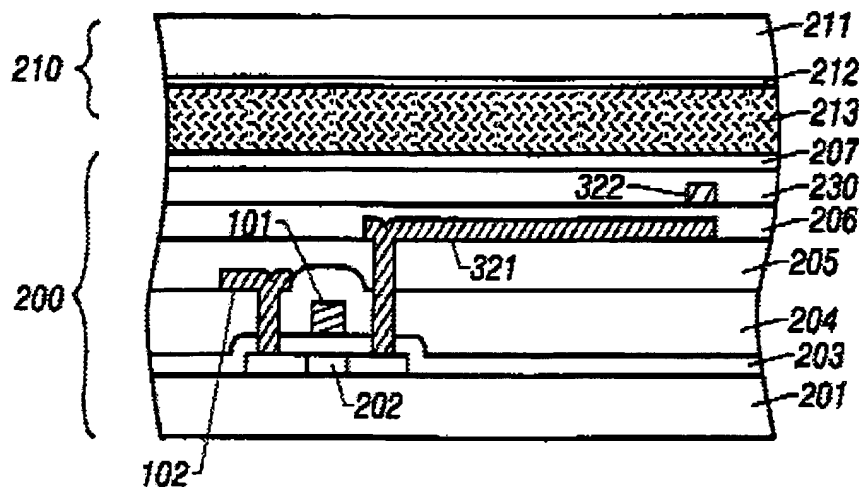
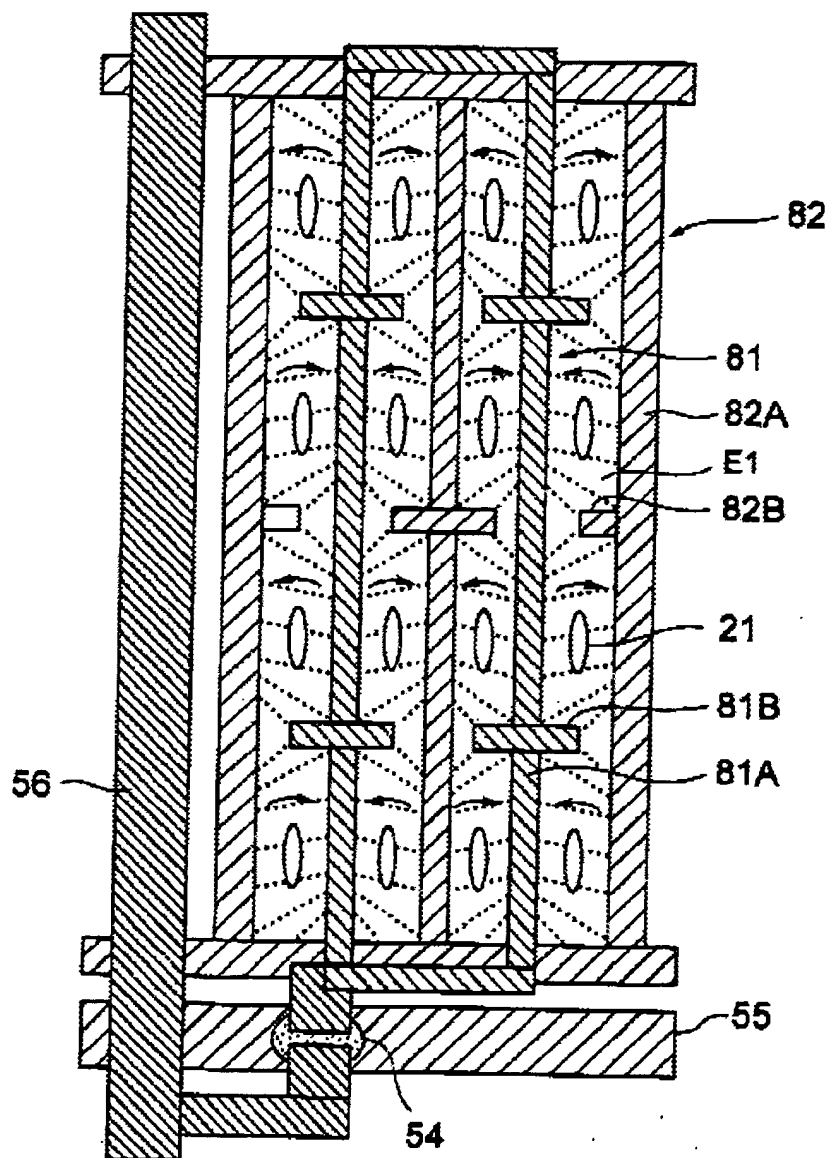


FIG. 10

Hirakata is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add a first passivation layer over the gate insulating layer, the data line and thin film transistor; a plurality of pixel electrodes on the first passivation layer; a second passivation layer over the pixel electrodes; a common line on the second passivation layer to comprise a structure with increased aperture ratio.

Suzuki et al (Suzuki) USPAT 6,452,657 teaches a checkered pattern of pixel electrodes that have gaps between opposed pixel electrode parts and common electrodes that have gaps between opposed common electrode parts (Figure 7).

FIG. 7



However, no reference was found with proper motivation to combine in such a way as to comprise all the structural limitations as to specific line and electrode placements wherein the plurality of common electrodes have portions that do not continue entirely across a pixel region, and wherein the portions of the common electrodes that do not continue entirely across the pixel region and the auxiliary pixel electrode form a virtual line parallel to the gate line as claimed by Applicant.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy L. Rude whose telephone number is (571) 272-2301. The examiner can normally be reached on Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on (571) 272-2415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



tlr

Timothy L Rude
Examiner
Art Unit 2883



Frank G. Font
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